Appendix B
(Clean copy of Pages 2-13 of the specification)

communications device on either a real time and/or polled basis.

Background Description

Figures 1-3 show a prior art radio frequency (RF) transmission system 100, as disclosed in U.S. Patent No. 5,819,172, incorporated herein by reference, for transmitting information from one of a plurality of originating processors A-N to at least one of a plurality of destination processors (A-N) which may be transported during operation. The system 100 includes at least one gateway switch 14 that stores information received from one of the at least one originating processor prior to transmission of the information to the at least one destination processor; a RF information transmission network 302 for transmitting stored information received from one of the at least one gateway switch 150 by RF transmission to at least one destination processor; and at least one interface switch 304 that connects a gateway switch 150 to the RF transmission network 302 and transmits stored information received from one

of the at least one gateway switch 14 to the RF information transmission network 130.

The information is transmitted to a receiving interface switch by the electronic mail system in response to an address of the receiving interface switch which has been added to the information originated by the originating processor by either the originating processor or gateway switch 14. The information is transmitted from the receiving interface switch to the RF information transmission network 302 with an address of the destination processor to receive the information which has been added by either the originating processor, a gateway switch or the receiving interface switch.

More particularly, FIG. 2 illustrates a block diagram of the connection between a plurality of gateway switches with mailboxes 14 in different electronic mail systems to the RF information transmission network 302. Multiple gateway switches with mailboxes 14 from a single electronic mail system 1-N may be connected to each interface switch 304 instead of the connection of a single gateway switch with a mailbox to a single interface switch as illustrated. A plurality of interface switches 304 connect information transmitted from at least one electronic mail system as

illustrated in FIG. 1. Optionally, a plurality of electronic mail systems 1-N are connected to a data input port of the RF information transmission system which is preferably hub switch 116. The dotted line communication paths 306 illustrate optional information transmissions in which information from a plurality of different electronic mail systems is concentrated at a single interface switch 304. The dotted line communication paths 306, 307 illustrate connections to additional gateway switches with mailboxes 14 within electronic mail systems 1-N.

The interface switches 304 function as a security check to determine that information transmissions originating from a gateway switch with mailbox 14 represent transmissions which should be coupled to a hub switch 116 of the RF information transmission network 302. The security check is performed by the interface switch 304 comparing the identification number of the RF receiver 119 which has been added by either an originating processor A-N or a gateway switch with mailboxes 14 with permissible identification numbers or the interface switch performing the addition of the identification number. The interface switch 304 also removes information added by the electronic mail system 1-N to the

information originated by the originating processor A-N from the stored information received from one of the gateway switches 14, and adds information used by the RF information transmission network 302 during transmission of the information originated at the originating processor to a RF receiver 119 in the RF information transmission network 302 which receives the information and transfers it to the destination processor A-N. Additionally, the interface switch 304 encodes data, which is required to format the display of the cathode ray tube (CRT) of the destination processor for the electronic mail system to which the destination processor is connected, in the form of a character or characters which are decoded by either the RF receiver 119 or the destination processor A-N. This information is added in decoded form back to the information which is processed by the destination processor with a format of the electronic mail system to which the destination processor A-N is connected.

The interface switches 304 also function to store information which has been stored by at least one gateway switch 14 that is received from a plurality of originating processors, and assemble the information from a plurality of originating processors

into a packet having a predetermined format and transmit the packet to the hub switch 116 within the RF information transmission network 302. The hub switch is the preferable node in the RF information transmission network to which communications from the gateway switches 14 should be transmitted as a consequence of it having jurisdiction over both local access and transport area (LATA) switches 14 and the local switches 112 in the RF information transmission network, which results in lesser network overhead.

The hub switch 116 receives the packet from the receiving interface switch 304 and disassembles the packet into information from the plurality of originating processors. The originating processors are either within a single electronic mail system such as system 1, or from a plurality of electronic mail systems, such as systems 1-N, or from outside of any electronic mail system from at least one additional processor 312 which is connected directly to interface switch 302 to originate information to be transmitted to a destination processor A-N in an electronic mail system as described below. The RF information transmission network 302 transmits the disassembled information from the hub switch 116, including the identification number of the RF receiver

119 transferring information, to the destination processor A-N to a local switch 112 storing the file identified by the identification number and any destination of the RF receiver in the RF information transmission network to which the information and identification number is to be transmitted by the RF information transmission network, and adds any destination of the RF receiver to the information. The RF information transmission network, in response to any added destination, transmits the information and identification number to the destination for RF broadcast to the RF receiver 119 for transfer to the destination processor A-N.

The information is transmitted to a receiving interface switch 304 from one or more gateway switches 14 by one or more electronic mail systems 1-N in response to an address of the receiving interface switch which has been added to the information originated by the originating processor by either the originating processor or gateway switch. The information is transmitted from the receiving interface switch 304 to the RF information transmission network with an address of the destination processor, such as a name of a user of the

destination processor A-N, to receive the information which has been added by either the originating processor A-N, a gateway switch 14 or the receiving interface switch 304.

Preferably, the address of the receiving interface switch is a code word, such as "TF-MOBOX", which is recognized throughout the electronic mail system when appended to information as directing the information to be transmitted to the interface switch 304. The address of the destination processor is preferably the identification number of the RF receiver 119 within the RF information transmission network 302. The address of the receiving interface switch may be added to the information originated by the originating processor, by a gateway switch 14 or by the originating processor A-N. The address of the receiving interface switch 304 may be added to the information by matching an identification of the destination processor A-N which may be the name of the individual utilizing the processor or some other information to add an address of an interface switch such as the aforementioned "TF-MOBOX" stored with the matched identification of the destination processor to the information as the address of the receiving interface switch.

Alternatively, the originating processor may be used to add the address of the receiving interface switch 150 by inputting the address of the receiving interface switch (TF-MOBOX) along with an identification of the destination processor A-N (name of recipient using the processor).

The originating processor A-N may also add the address of the receiving interface switch 304 by matching an identification of the destination processor (name of the user of the processor) with a stored identification of a destination processor and adding an address of the interface switch (TF-MOBOX) stored with the matched identification of the destination processor to the information as the address of the receiving interface switch.

The identification number may be added to the information originated by the originating processor or, alternatively, maybe added by the originating processor by matching an identification of the destination processor (the name of the user of the processor) with a stored identification of a destination processor (the authorized user of the destination processor) and adding an identification number stored with the matched identification of the destination processor to the information as the

identification number of the RF receiver 119. Alternatively, the aforementioned matching process may be performed by either the gateway switch 14 or the interface switch 304. The additional processors 312 originates information from outside of any electronic mail system.

Processors 312 provide an address of at least one destination processor in an electronic mail system, such as the name of the user, to receive information transmitted by the RF information transmission system 302, or an identification number of the RF receiver 119 receiving information and transferring the information to the destination processor. The interface switch 304 which receives the information from each processor 312 adds information used by the RF information transmission network 302 during transmission of the information to the RF receiver 119 receiving the information in the same manner as described above with respect to the interface switch 304.

Processors 312 are only required to have a telephone modem and support programming to format information for RF transmission to a destination processor A-N within any one of one or more electronic

mail systems 1-N. The processors 312 are not required to have the necessary electronic mail system software present in originating processors A-N or interconnections with an electronic mail system. As a result of the connection to the interface switch 304, information originating from the additional processors 312 may be transmitted by RF transmission to a destination processor A-N within any one or a plurality of electronic mail systems with the user of the processor 312, the processor 312 or the interface switch 304 only having to supply an identification number of the receiver 119 to input information into the RF information transmission system 302 for RF transmission to a destination processor.

The difference between originating information by one of the additional processors 312 outside of any electronic mail system and originating information by one of the processors within one of the electronic mail systems is that the direct

connection of the additional processor to the interface switch 304 eliminates the requirement for the adding of an address of the interface switch 304 which is required by the electronic mail systems to forward the information to the interface switch where necessary formatting of the information to be compatible with the RF information transmission system is performed. The interface switch 304 packetizes information originating from the additional processors 312 in the same manner as described above with respect to information originating from within an electronic mail system.

Information from within an electronic mail system and originating from additional processors 312 outside of the electronic mail system may be formatted into the same packets which are forwarded to the hub switch 116. Additionally, interface switch 304 may be connected only to the additional processors 312 to provide an interface only for processors outside of any electronic mail system to destination processors A-N within one or more electronic mail systems 1-N. The only information which is necessary to be inputted by the additional processors 312 is the address of the destination processor (user of the processor). The addition of the identification number

of the receiver 119 may be added by matching of an identification of the destination processor with stored destination processors within the additional processor 312, or the interface switch 304 with an identification number of the receiver 119 stored with an identification of a destination processor A-N used as an identification of the destination processor upon a match having been made.

Prior art FIGs. 1-3, however, do not generally relate to, for example, providing an integrated or combination real time and polled electronic messaging system, method and/or a computer readable medium storing computer-executable instructions for enabling e-mail messages and/or other data messages and/or services to be transmitted and/or received via a wireless communications device on either a real time and/or polled basis

In recent years, technological advance and consumer demand together have made wireless messaging and related services (e.g., eLink℠ provided by Motient Corporation, Reston, VA) increasingly popular. These services allow users